# Bachelor of Science in Industrial Engineering Graduation Requirements

**Mathematics** ................................................................. [24 credits]
- MATH 124 (*or 127)* [5cr] Calculus with Analytic Geometry I
- MATH 125 (*or 128)* [5cr] Calculus with Analytic Geometry II
- MATH 126 (*or 129)* [5cr] Calculus with Analytic Geometry III
- MATH 307 [3cr] Intro to Differential Equations [pr: MATH 125]
- MATH 308 [3cr] Linear Algebra with Applications [pr: MATH 126]
*The sequence of MATH 127, 128, 129 may be taken in lieu of 124, 125, 126.

**Industrial Engineering Required Core Courses** ............................... [24 credits]
- IND E 337 [4cr] Intro to Manufacturing Systems
- IND E 410 [4cr] Applications of Linear Programming [pr: either MATH 136 or MATH 308, CSE 142]
- IND E 495 [4cr] IE Senior Design [pr: IND E 494]

**Physical Sciences** .................................................................. [25 credits]
- CHEM 142 [5cr] General Chemistry with lab
- CHEM 152 [5cr] General Chemistry with lab [pr: CHEM 142]
- PHYS 121* [5cr] Mechanics with lab [pr: MATH 124]
- PHYS 122* [5cr] Electromagnetic with lab [pr: MATH 125]
- PHYS 123* [5cr] Waves with lab [pr: MATH 126]
*The accompanying lab sections to PHYS 121, 122, 123 must be completed.

**Written and Oral Communications** ........................................ [12 credits]
- ENGL COMP [5cr] University English Composition requirement
- HCDE 231 [3cr] Intro to Technical Writing [pr: ENGL COMP]

**Technical Electives** ................................................................ [minimum 37 credits]

- Complete a minimum of 37 credits, including AT LEAST one course from EACH of the following 5 categories.

**General Engineering/Computing Courses** ............................... [28 credits]
- CSE 142 [4cr] Computer Programming for Engineers
- AA 210 [4cr] Engineering Statics [pr: MATH 126, PHYS 121]
- EE 215 [4cr] Fund. of Electrical Engineering [pr: PHYS 122, MATH 126]
- CEE 220 [4cr] Intro to Mechanics of Material [pr: AA 210]
- IND E 250 [4cr] Fund. of Engineering Economy

**Visual, Literary & Performing Arts/Individuals & Society** .......... [30 credits]
*Minimum 10 credits in VLPA required. Minimum 10 credits in I&S required.

**General Engineering/Computing Courses** ............................... [28 credits]
- CSE 142 [4cr] Computer Programming for Engineers
- AA 210 [4cr] Engineering Statics [pr: MATH 126, PHYS 121]
- EE 215 [4cr] Fund. of Electrical Engineering [pr: PHYS 122, MATH 126]
- CEE 220 [4cr] Intro to Mechanics of Material [pr: AA 210]
- IND E 250 [4cr] Fund. of Engineering Economy

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**Total credits required for Graduation** .................................. 180